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EXAMINER

LIANG, REGINA

ART UNIT	PAPER NUMBER
2674	5

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/871,270	CLAPPER, EDWARD O.
	Examiner Regina Liang	Art Unit 2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 7/7/03.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-28,31 and 33-37 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-28,31 and 33-37 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
2. Claims 8, 10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Fig. 2 of the specification discloses a user input device 4 having two sensors located at the first and second ends of the user input device, respectively, which supports the user input device as claimed in claim 1. Claim 10 depends from claim 1 and requires an optical sensor located at the first end, which is disclosed in an alternative embodiment as shown in Fig. 5 of the specification. However, the specification does not disclose an embodiment which combines the embodiments of Fig. 2 and Fig. 5. Therefore, the specification does not disclose an optical sensor located at the first end, wherein the optical sensor indicates the position of the housing as claimed in claim 10 in addition to the user input device have first end and second end as claimed in claim 1.

Fig. 2 of the specification discloses a user input device 4 having two sensors located at the first and second ends of the user input device, respectively, which supports the user input device as claimed in claim 1. Claim 8 depends from claim 1 and requires the controller provides at least one of sound or air in response to the activation of the activatable element. However, the disclosure of a speaker and an air controller are found in Fig. 5 of the specification which is an embodiment separate from that of Fig. 2, Fig. 2 of the specification does not disclose the speaker and the air controller, and the specification does not disclose any embodiment to combine the embodiments as in Fig. 2 and Fig. 5. Therefore, the limitation as claimed in claim 8 is not supported by the specification.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11, 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 the phrase "a controller to indicate a position of the first end and the opposite end and ..... to activate based on the indicated position of at least the first end of the housing" is unclear and inconsistent since the controller indicates a position of the two ends and subsequently activates the function based on the controller indicating only a position of the first end, i.e. is the position indicated by using only the first end or using both ends?

Claims 3 and 11 are unclear for the same reason as set forth in claim 1 above.

As to claim 26, it is unclear and confusing as to “a user-input device comprising a controller to receiver one or more signals from a plurality of sensors located on a display device of a processor-based system”, since it is not understood whether the claim is claiming “transmitting elements” located on a display device of a processor-based system or “detecting or receiving elements” located on a display device of a processor-based system. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term “sensor” in claim 26 is used by applicant to mean “transmitting or emitting elements,” while the accepted meaning is “detecting or receiving elements”, and this contradicts the art accepted meaning and causes confusion.

***Claim Rejections - 35 USC § 103***

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiga (US. PAT. NO. 6,028,595) in view of Mallicoat (US. PAT. NO. 4,777,329).

Shiga discloses a system comprising a user-input device (5), a plurality of sensors located on a display device of a processor-based system, a controller (8) transmit information to the processor based-system regarding a position of the user-input device and cause one or more pixels of the display to activate based on the transmitted information (see Figs. 1 and 2). Shiga does not disclose the controller is located in the user-input device to receive transmitting signals transmitted from the transducers located on a display device. However, Mallicoat teaches a mobile element (stylus) comprising a controller for receiving the transmitting signals transmitted from the transmitters located on a writing surface device. Thus, it would have been obvious to

one having ordinary skill in the art at the time the invention was made to modify the controller of Shiga to be located in the user-input device as taught by Mallicoat so as to provide a graphic input system for accurately determining and calculating position coordinate data of the user-input device.

6. Claims 12-18, 24, 25, 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiga and Mallicoat, and further in view of Ward et al (US. PAT. NO. 6,184,873 hereinafter Ward).

As to claims 12 and 17, Shiga as modified by Mallicoat teaches determining, in the user-input device, the position of the user-input device, note the rejection as set forth in claim 26 above. Shiga as modified by Mallicoat does not disclose determining a distance of first end and a second end of the user-input device relative to a display device. Shiga teaches a pen sensor (6) can be located at a second end opposite to pointing tip of the pen. Figs. 1, 2, 8 of Ward teaches a pen positioning system having multiple sensors (output elements 18, 22), one sensor (18) located at a first end (pointing tip) of the pen, and a controller to indicate the position of the pen based on the signals sensed by the first and second sensors. Ward also suggests the second sensor can be located at different parts of the pen (see Figs. 4 and 8 of Ward). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user-input device of Shiga as modified by Mallicoat to have two sensors one located at the first end another located at the second one of the user-input device so as to provide a user input device adapted to accurately determining the location of the pointing tip of the user input device.

As to claims 13-16, 18, 24, 27, 28, Ward teaches the receiving information regarding the angle of the first end of the user input device and determining the orientation of the user input device as claimed (col. 3, line 1 to col. 4, line 6).

As to claim 25, Fig. 6 of Ward teaches determining the position of the user-input device based on an identifiable marking on the display device.

7. Claims 31-37 rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al (US. PAT. NO. 5,646,650 hereinafter Miller) in view of Wagner (US. PAT. NO. 5,767,843 hereinafter Wagner).

As to claims 31, 33, Miller discloses a digital airbrush peripheral, comprising a housing (50), a display (20) coupled to the housing to indicate a currently active digital paint color (see Fig.2), an activatable element (370, col. 7, lines 1-3) coupled to the housing to activate the digital airbrush peripheral, and an interface coupled to the activatable element, to communicate information regarding the activatable element to a data processor device. Miller does not disclose a control unit to cause air to be generated in response to an activation of the activatable element. However, Wagner teaches an airbrush comprising a control unit to cause air to be generated in response to an activation of the activatable element (col. 3, lines 56-65). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital airbrush peripheral of Miller to have an generator as taught by Wagner so as to provide a digital electronic device for controlling the operation of the air brush simulation in response to manipulation of a control lever on the pen type sensor.

As to claim 34, Miller teaches sensors (360) to sense information regarding the position of the digital airbrush peripheral.

As to claim 35, Miller teaches a processor to cause a light to be emitted from the digital airbrush peripheral, wherein the light indicates the color of the digital paint (350-352).

As to claim 37, Wagner teaches the activatable element controls the intensity of the digital spray on a display device (col. 3, line 64 to col. 4, line 3).

As to claim 36, Miller as modified by Wagner does not disclose a sound generator to generate sounds in response to the selection of the activatable element. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital airbrush peripheral of Miller as modified by Wagner to have a sound generator as claimed to provide a digital electronic device for controlling the operation of the air brush simulation.

8. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner in view of Ward and Shiga.

As to claims 1, 2, Fig. 1 of Wagner disclose a user input device comprising a housing and a controller to indicate a position of the user input device to cause one or more pixels (images) of a display device to activate based on the indicated position of the user input device. Wagner does not disclose the controller indicate the position of a first end and a second end of the user input device. However, Figs. 1, 2, 8 of Ward teaches a pen positioning system having multiple sensors (output elements 18, 22), one sensor (18) located at a first end of the pen, and a controller to indicate the position of the pen based on the signals sensed by the first and second sensors. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the user input device of Wagner to have two sensors one located

at the first end of the user input device taught by Ward so as to provide a user input device adapted to accurately determining the location of the pointing tip of the user input device. Wagner as modified by Ward does not disclose the second sensor located at a second end opposite to the first end of the user input device. However, Ward suggests the second sensor can be located at different parts of the pen (see Figs. 4 and 8 of Ward), thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wagner as modified by Ward to position the second sensor at the second end of the user input device, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Furthermore, Shiga teaches a pen sensor (6) can be located at the second end opposite to pointing tip at the first end of the pen, thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wagner as modified by Ward to position the second sensor at the second end of the user input device for eliminating an input error caused by a difference between a displayed point and a touched point by an angle of a line of sign.

As to claim 3, Ward teaches the first and the second sensor are transducers (ultrasonic transmitters).

As to claim 4, Ward teaches the controller transmits the position of the first end of the pen to a processor-based system (see Fig. 7).

As to claims 5, 6, Ward teaches the controller indicates the orientation of the pen to a processor-based system (col. 3, line 1 to col. 4, line 6).

As to claim 7, Ward discloses the user input device having an activatable element (64 in Fig. 9). Wagner as modified does not disclose the activatable element is disposed between the

first and opposite end. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wagner as modified by Ward and Shiga to have the activatable element disposed between the first and opposite end as claimed, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

As to claim 8, Wagner teaches adjusts the intensity of pixels based on selection level of the activatable element (col. 3, line 65 to col. 4, line 3).

As to claim 9, Wagner as modified does not disclose a controller allows a selection of a color in response to the activation of the activatable element. However, Wagner and Ward teaches the controller adjusts intensity of the pixels and the width of an electronic paint stroke based on selection level of the activatable element (col. 4, lines 31-38). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wagner as modified by Ward and Shiga to have the controller allows a selection of a color in response to the activation of the activatable element so as to provide color selection in the painting or drawing applications.

As to claim 10, Wagner teaches an optical sensor located at the first end of the user input device.

As to claim 11, Wagner teaches the controller causes the one or more pixels to be activated in an airbrush-like manner based on the position of the user input device.

9. Claims 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiga, Mallicoat and Ward as applied to claims 17 and 18 above, and further in view of Chery et al (US. PAT. NO. 6,104,387 hereinafter Chery).

As to claim 19, Shiga as modified by Mallicoat and Ward does not disclose the processor to determine the speed of the user input device as it is moved. However, Chery teaches an image writing system comprising a processor to determine the speed of the stylus as it is moved (col. 4, line 64 to col. 5, line 4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the processor of Shiga as modified by Mallicoat and Ward to determine the speed of the user input device as it is moved as taught by Chery such that the relative position of the user input device is determined at multiple times during which the user input device is being employed in order to record the writing on the surface.

As to claim 20, Ward teaches determining the orientation of the user input device as claimed (col. 3, line 1 to col. 4, line 6).

10. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiga, Mallicoat and Ward as applied to claim 17 above, and further in view Wagner.

As to claim 21, Shiga as modified by Mallicoat and Ward does not disclose an activatable element and the controller to detect an activation of the activatable element. However, Wagner teaches an input device for a computer comprising a control unit to cause the image be generated in response to an activation of the activatable element (col. 3, lines 56-65). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the input device of Shiga as modified by Mallicoat and Ward to have an activatable element and the

controller as taught by Wagner so as to provide a digital electronic device for controlling the operation of computer in response to manipulation of a control lever on the pen type sensor.

As to claim 22, Ward teaches the processor to provide an air in response to the activation of the activatable element (20 in Fig. 3).

As to claim 23, Wagner teaches adjusting the intensity of pixels based on selection level of the activatable element (col. 3, line 65- col. 4, line 3).

***Response to Arguments***

11. Applicant's arguments with respect to claims 1-28, 31, 33-37 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's remarks regarding 112, 1<sup>st</sup> rejection are not persuasive since as clearly set forth in the rejection above, the specification only disclose two embodiments (Fig. 2 and Fig. 5) but the specification does not disclose an embodiment combining two embodiments.

Applicant's remarks regarding 112, 2<sup>nd</sup> rejection are not persuasive since as recited the position is indicated by both the first end and the opposite end, therefore an "indicated position" must be made up of both the first and other end and this "indicated position" can not be indicated by the position of the first end of the housing.

Applicant's remarks regarding claim 1 are not persuasive. Fig. 1 of Wagner teaches the user-input device comprising a controller.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
REGINA LIANG  
PRIMARY EXAMINER  
ART UNIT 2674